

REMARKS

The Office Action dated May 22, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

STATUS OF THE CLAIMS

Claims 1-15, 32, 37, and 40-59 are currently pending in the present application, of which claims 1, 15, 32, 37, and 40-42 are independent claims. Claims 41-43, 45, and 47-49 have been amended, and claims 60-62 have been added, to more particularly point out and distinctly claim the subject matter of the present invention. No new matter has been added. Claims 1-15, 32, 37, and 40-62 are respectfully submitted for consideration.

ALLOWABLE SUBJECT MATTER

Claims 5, 46, and 56 were objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for these explicit indications of allowable subject matter. Applicant respectfully submits that the base claims from which claims 5, 46, and 56 depend upon should also be allowed, as discussed below. Thus, it is respectfully requested that the objection to claims 5, 46, and 56 be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. 112

Claims 50-52 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Applicant respectfully traverses this rejection.

The Office Action asserted that it is unclear whether claims 50-52 are dependent claims or independent claims (see Office Action at page 2). However, claims 50-52 are clearly presented in dependent form, referring back to and further limiting apparatus claim 41. For instance, claim 50 recites that a base station controller includes the features of apparatus claim 41. Claim 41 does not require that the apparatus is a base station. Therefore, claim 50 further defines the apparatus of claim 41 by defining it as a base station. Similarly, claim 52 is directed to a communication system comprising a mobile device, a core network node, and an apparatus according to claim 41. Claim 52 further defines a communication system configured to include the mobile device, the core network node, and the apparatus of claim 41.

Thus, the scope of claims 50-52 particularly point out and distinctly claim the subject matter of the present invention by further defining the scope of claim 41. Accordingly, claims 50-52 are proper and within the guidelines of MPEP 608.01(n). Therefore, Applicant respectfully requests that the rejection be withdrawn and that claims 50-52 be properly considered as dependent claims.

CLAIM REJECTIONS UNDER 35 U.S.C. 103

Claims 1-2, 9-15, 32, 37, 40-43, and 50-53 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Appln. Pub. No. 2003/0137948 of Komandur et al. (“Komandur”) in view of U.S. Patent Appln. Pub. No. 2002/0029261 of Shibata (“Shibata”). The Office Action acknowledged that Komandur fails to disclose or suggest all of the features of the rejected claims and cited Shibata to remedy the deficiencies of Komandur. Applicant respectfully traverses this rejection.

Claim 1, upon which claims 2-14 depend, is directed to a system including at least one access network configured to provide a wireless interface between a mobile device and the at least one access network for communication of packet data. The system also includes a core network including at least one core network node configured to support communication of packet data on the wireless interface and configured to release a data communication link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device. The system further includes a controller provided in association with the at least one access network. The controller is configured to monitor at least one condition associated with the wireless interface, and, when the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of the one or more messages from the core network node.

Claim 15 is directed to a method including establishing a data communication link via an access network of a data communication system to a mobile device on a wireless

interface between the access network and the mobile device. The method also includes sending one or more messages from a core network node of the data communication system to the mobile device via the access network. The core network is configured to release the data communication link in the absence of a response to the one or more messages. The method further includes detecting at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met. The method additionally includes subsequent to such detection, generating at the controller and sending to the core network node one or more messages in response to the one or more messages from the core network node.

Claim 32 is directed to a method including establishing a data communication link via an access network of a data communication system to a mobile device on a wireless interface between the access network and the mobile device. The method also includes sending one or more messages from a core network node of the data communication system to the mobile device via the access network. The core network node is configured to release the data communication link in the absence of a response to the one or more messages. The method further includes detecting at a controller provided in association with the access network that the mobile device is out of reach. The method additionally includes notifying the core network node that the mobile device is out of reach. The method also includes in response to receiving the notification, retaining the data communication link but pausing from sending further data packets from the core network

node to the mobile device and processing the data packets in accordance with a predefined policy.

Claim 37 is directed to an apparatus including establishing means for establishing a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device. The apparatus also includes first sending means for sending one or more messages from a core network node of the data communication system to the mobile device via the access network. The core network node is configured to release the data communication link in the absence of a reply to the one or more messages. The apparatus further includes detection means for detection at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met. The apparatus additionally includes second sending means for sending a further message from the controller to the core network node subsequent to such detection. The core network node postpones the release of the release link in response to such a further message.

Claim 40 is directed to a system including an establishing unit configured to establish a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device. The system also includes a first sending unit configured to send one or more messages from a core network node of the data communication system to the mobile device via the access network. The core network node is configured to release the data

communication link in the absence of a reply to the one or more messages. The system further includes a detector configured to detect at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met. The system additionally includes a second sending unit configured to send a further message from the controller to the core network node subsequent to such detection. The core network node postpones the release of the release link in response to such a further message.

Claim 41, upon which claims 43-52 depend, is directed to an apparatus including a processor configured to monitor at least one condition associated with the wireless interface. The apparatus is associated with at least one access network via which a data communication link is established between the mobile device and a core network node configured to release the data communication link in the absence of a response to the one or more messages directed to the mobile device. The apparatus also includes a transmitter configured to, in response to an indication that the at least one condition is not met, generate on behalf of the mobile device and transmit to the core network node one or more messages in response to the one or more messages from the core network node, or configured to, in response to an indication that the at least one condition is not met, generate and transmit to the core network node a message in response to which the core network node postpones release of the data communication link.

Claim 42, upon which claims 53-59 depend, is directed to a method including monitoring at least one condition associated with a wireless interface constituting part of

a communication link between a mobile device and a core network node configured to release the data communication link in the absence of a response to one or more messages directed to the mobile device. The at least one condition includes a condition. The method also includes in response to an indication that the at least one condition is met, either generating on behalf of the mobile device and sending to the core network node one or more messages in response to the one or more messages from the core network node, or otherwise sending a message to the core network node in response to which the core network node postpones release of the data communication link.

Applicant respectfully submits that the combination of Komandur and Shibata fails to disclose or suggest all of the features of any of the presently pending claims.

Komandur generally relates to a system, method, and apparatus for transmitting packet data over a wireless network to a mobile station. Packet data are received at a wireless content switch that is part of the wireless data network. The wireless content switch is equipped to detect lost packets, lost acknowledgements, and take appropriate remedial action, without invoking the congestion control and avoidance mechanisms of the transmission control protocol (see Komandur at Abstract).

Shibata generally relates to an information supply system that supplies desired information to service subscribers, capable of automatically selecting and supplying information required by the user from whole information. Local servers are provided with user databases that store reception settings set by individual service subscribers. When server subscriber terminal moves to a service area of an access point connected, a

local server establishes a channel with the service subscriber terminal, and references the corresponding reception setting from a user database and only presents the message that matches the reception setting from message data stored in the local server to the service subscriber terminal (see Shibata at Abstract).

Applicant respectfully submits that the combination of Komandur and Shibata does not disclose or suggest all of the features of any of the presently pending claims. Specifically, the combination of Komandur and Shibata fails to disclose or suggest “a controller ... configured ... to generate and send to the core network node one or more messages in response to one or more of said one or more messages from **the core network node**,” as recited in claim 1 and similarly recited in claims 15 and 41-42 (emphasis added).

The Office Action took the position that these features are disclosed by Komandur at paragraphs [0057] and [0064] (see Office Action at page 3). In part of the cited portion, Komandur states, “**the mobile station** ... transmits an acknowledgment ... to the wireless content switch ... which is forwarded to the content source ...” (see Komandur at paragraph [0057], lines 12-14) (emphasis added). The Office Action asserted that the wireless content switch corresponds to the controller of the claim invention and that the acknowledgement corresponds to the one or more messages generated and sent by the controller of the claimed invention (see Office Action at page 3).

However, Komandur does not disclose or suggest that the wireless content switch forwards to the content source the acknowledgement in response to one or more

messages from the content source. Instead, as stated above, the wireless content switch forwards to the content source the acknowledgement in response to the acknowledgement from **the mobile station**. Accordingly, Komandur fails to disclose or suggest a controller configured to generate and send to a core network node one or more messages in response to one or more messages from **the core network node**.

Shibata does not cure these deficiencies in Komandur. Shibata refers to an access point (AP) that establishes a communication channel with a mobile radio communication terminal (see Shibata at paragraph [0052]). Shibata also refers to a local server that sends a channel disconnection instruction to the AP when the local server detects that there is no response from the terminal (see Shibata at paragraph [0054]). The Office Action asserted that the local server corresponds to the core network node of the claimed invention (see Office Action at page 4). However, Shibata fails to disclose or suggest a controller configured to generate and send to the local server one or more messages in response to one or messages from the local server. Accordingly, Shibata does not disclose or suggest a controller configured to generate and send to a core network node one or more messages in response to one or more messages from the core network node.

Thus, the combination of Komandur and Shibata fails to disclose or suggest “a controller ... configured ... to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node,” as recited in claim 1 and similarly recited in claims 15 and 41-42.

Furthermore, the combination of Komandur and Shibata does not disclose or suggest “a transmitter configured to ... generate and transmit to the core network node a message in response to which the core network node postpones release of said data communication link,” as recited in claim 41 and similarly recited in claims 32, 37, 40, and 42.

The Office Action took the position that these features are disclosed by Komandur at paragraph [0045] (see Office Action at page 7). In part of the cited portion, Komandur states: “The wireless content switch ... delays retransmission of the data packets ... [A] determination is made as to whether the retransmission timeout has occurred. If a retransmission timeout has occurred, then the ‘drain the packet’ function is implemented” (see Komandur at paragraph [0045], lines 4-10). As discussed above, the Office Action asserted that the wireless network switch corresponds to the controller of the claimed invention (see Office Action at page 3). However, Komandur fails to disclose or suggest that the wireless content switch includes a transmitter configured to generate and transmit to a core network node a message in response to which the core network node postpones release of a data communication link. At most, Komandur refers to the wireless content switch that postpones release of the data packets.

Shibata does not cure these deficiencies in Komandur. As discussed above, Shibata refers to the local server that sends the channel disconnection instruction to the AP when the local server detects that there is no response from the terminal (see Shibata

at paragraph [0054]). The Office Action asserted that the local server corresponds to the core network node of the claimed invention (see Office Action at page 4).

However, Shibata fails to disclose or suggest a transmitter configured to generate and transmit to the local server a message in response to which the local server postpones release of the channel. Accordingly, Shibata does not disclose or suggest a transmitter configured to generate and transmit to a core network node a message in response to which the core network node postpones release of a data communication link. In fact, Shibata teaches away from the claimed invention because Shibata refers to disconnecting the channel as soon as there is no response from the terminal, whereas the claimed invention is directed to postponing release of the data communication link even when there is no response from the mobile device.

Thus, the combination of Komandur and Shibata fails to disclose or suggest “a transmitter configured to ... generate and transmit to the core network node a message in response to which the core network node postpones release of said data communication link,” as recited in claim 41 and similarly recited in claims 32, 37, 40, and 42.

Furthermore, there is not proper legally sufficient motivation to combine Komandur and Shibata. The Office Action took the position that it would have been obvious to combine the references “for the advantage of presenting only information selected by the information selecting means to the service subscriber terminal that exists in the service area” (see Office Action at page 4). However, this alleged motivation to combine is unreasonable because it is completely different from the advantage offered by

the claimed invention, of retaining a data communication link for a mobile device even where there is an initial indication that the link may no longer exist in a service area (see Specification at paragraphs [0009] and [0022]). The link is retained in case the indication is incorrect and the mobile device still exists in the service area but is unable to respond because of circumstances beyond the control of the user (e.g., where the user temporarily moves behind a tall building or into a tunnel) (see Specification at paragraphs [0010] and [0022]).

For at least the reasons discussed above, Applicant respectfully submits that the combination of Komandur and Shibata does not disclose or suggest all of the elements of claims 1, 15, 32, 37, and 40-42. Therefore, Applicant respectfully requests that the rejection of claims 1, 15, 32, 37, and 40-42 be withdrawn.

Claims 2, 9-14, 43, and 50-53 depend respectively from, and further limit, claims 1 and 41-42. Thus, each of claims 2, 9-14, 43, and 50-53 recite subject matter that is neither disclosed nor suggested in the combination of Komandur and Shibata. It is, therefore, respectfully requested that the rejections of claims 2, 9-14, 43, and 50-53 be withdrawn.

Claims 3, 8, 44, 49, 54, and 59 were rejected under 35 U.S.C. 103(a) as being unpatentable over Komandur and Shibata and further in view of U.S. Patent No. 6,041,235 of Aalto ("Aalto"). Claims 6, 47, and 57 were rejected under 35 U.S.C. 103(a) as being unpatentable over Komandur and Shibata and further in view of U.S. Patent No. 6,792,278 of Ahmanvaara et al. ("Ahmanvaara"). Claims 4, 45, and 55 were rejected

under 35 U.S.C. 103(a) as being unpatentable over Komandur and Shibata and further in view of U.S. Patent No. 7,154,903 of Sivalingham (“Sivalingham”). Claims 7, 48, and 58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Komandur and Shibata and further in view of U.S. Patent Appln. Pub. No. 2002/0057658 of Lim (“Lim”). Applicant respectfully traverses these rejections.

Aalto generally relates to a handover method and arrangement in which a mobile station measures the reception level and the quality of the signal in the serving cell as well as the level of the signal of adjacent cells (see Aalto at Abstract). Ahmanvaara generally relates to a method for establishing a signaling connection with a mobile station (see Ahmanvaara at Abstract). Sivalingham generally relates to a packet control function within a wireless communication network that manages incoming data for dormant mobile terminals (see Sivalingham at Abstract). Lim generally relates to a method for serving a packet dormant handoff (see Lim at Abstract).

Claims 3-4, 6-8, 44-45, 47-49, 54-55, and 57-59 depend upon independent claims 1 and 41-42. As discussed above, the combination of Komandur and Shibata fails to disclose or suggest all of the elements of claims 1 and 41-42. Furthermore, Aalto, Ahmanvaara, Sivalingham, and Lim do not cure the deficiencies in the combination of Komandur and Shibata, as Aalto, Ahmanvaara, Sivalingham, and Lim also fail to disclose or suggest, at least, “a controller ... configured ... to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node,” as recited in claim 1 and similarly recited in

claims 41-42. Thus, the combination of Komandur, Shibata, Aalto, Ahmanvaara, Sivalingham, and Lim do not disclose, or suggest all of the elements of claims 3-4, 6-8, 44-45, 47-49, 54-55, and 57-59. Additionally, claims 3-4, 6-8, 44-45, 47-49, 54-55, and 57-59 should be allowed for at least its dependence upon independent claims 1 and 41-42, and for the specific elements recited therein.

CONCLUSION

For the reasons explained above, it is respectfully submitted that each of claims 1-15, 32, 37, and 40-62 recite subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-15, 32, 37, and 40-62 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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